Rep Michael Honda and and Muhammed Chaudhry, president and CEO, Silicon Valley Education Foundation, San Jose, published the following op-ed in The Hill this week:

Creative, out-of-the-box thinking and collaborative problem-solving are concepts synonymous with Silicon Valley. They are attributes that power our industry, motivate our work ethic and define our can-do spirit. Ironically, these skills are often missing when it comes to educational policies and mandates imposed on our local public schools. The result: It is not perceived as a priority for the future workforce of America.

We hear time and again from our local business and community leaders that local jobs go unfilled by local talent because they can't find people with the required education and skills to perform these duties. These jobs run across the spectrum: from technicians with a trade school certificate to engineers with a master's degree.

That is why we've been pushing an agenda based on teaching science, technology, engineering and mathematics, or STEM.

We believe that students in our local schools, who have been exposed to a rich diet of science, technology, engineering and mathematics, will have the foundational knowledge and skills to flourish in the classroom and beyond.

Here's an overview of the problem: If a school district focuses only on performing well on a high-stakes California state test, an opportunity to experience and make applications in science, engineering design and computer science is lost. Rote memorization of facts and figures is over-valued. Our students' school experience, consequently, becomes a test prep factory, a setting devoid of meaningful human interaction and richer curricular connection. A child's spirit of wonder and intrigue becomes a sterile test score result.

To fix this problem, we both have STEM initiatives that continue the push to provide excellent STEM programming into our schools. At the local and regional level, Silicon Valley Education Foundation has two innovative school programs: one is called Stepping Up to Algebra and the other is Stepping Up to Science. These two programs prepare local students to find success in

eighth-grade algebra – the "gateway" math course – and their first college-track science course in the ninth grade.

More than 4,000 Silicon Valley youths have participated in our program. Mastering eighth-grade algebra has long been acknowledged as the single best predictor of success in college. Despite this factor, California has abandoned its longtime policy urging schools to place eighth-graders in Algebra I. We believe that Silicon Valley Education Foundation programs have helped children find success in mathematics with the help of educators.

At the national policy level, Stepping Up to STEM and the Elementary Educator STEM Content Coach are the latest legislative efforts by Rep. Michael Honda, D-San Jose. The first bill establishes an Office of STEM Education, which will serve a vital role in promoting excellence in education and securing American competitiveness in the workplace.

By providing support to states, the bill helps STEM Networks take the lead in shaping best practices, with input from local teachers, businesses, institutions of higher education and other stakeholders. The bill also provides grant funding to outside entities to develop educational technology innovations, including data analytic tools that will help school districts with reporting requirements under federal accountability mandates.

The second bill creates a cohort of elementary teachers in our local schools who are steeped in STEM content knowledge and skilled in integrating the STEM disciplines into other curricular areas and real-life situations. Building a firm STEM foundation in the earliest grades will have an impact on a child's future learning trajectory – especially now, when schools are abandoning science and other "nonessential" topics in order to prepare for state tests.

California offers a successful example of how a state STEM network, the California STEM Learning Network, leverages public and private partnerships to increase STEM resources within the public schools. By working collaboratively together, the California network partners with various organizations, both public and private, to bring enhanced science programming to the school communities. In addition, the networks develop strategies to increase participation of underrepresented populations in STEM disciplines.

Silicon Valley should lead the state in excellent school programming. Innovation and

out-of-the-box thinking are the economic engines that drive our business community. Yet, we find it ironic that what is seen as exemplary in the business community is undervalued in school policy.

In the collaborative, innovative spirit of our Silicon Valley, we invite you to share our vision of creating educational opportunities for each and every student in American public schools. Silicon Valley offers a prime example to the nation of how a community's vision, regional philanthropic giving, state STEM networks, and coordinated federal policies can push forward excellent school programming.

It's time to step up to STEM: the competitiveness of our economy demands it and the children within our community deserve it.

Honda is a former educator, represents Silicon Valley and serves on the House Appropriations Committee. Chaudhry is president and CEO of the Silicon Valley Education Foundation in San Jose.

Read more:
http://thehill.com/blogs/congress-blog/education/290091-stepping-up-stem-programs-in-our-schools-will-make-us-more-competitive#ixzz2Oqa2pyZI

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